



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Bateman et al.

)

) Art Unit: 2881

)

Serial Number 10/693,874

) Examiner: N. Wells

)

Filed October 28, 2003

) Atty Docket: DEH071

For: Mass Spectrometer

COMMISSIONER FOR PATENTS
PO Box 1450
Alexandria, VA 22313-1450

Sir:

The below identified communication(s) or document(s) is(are) submitted in the above application or proceeding:

☐ Advance Order for Patent Copies:

☒ Issue Fee Transmittal

☐ Priority Document

☒ Check in the Amount of \$1,670.00

☐ Formal Drawings (___ sheets)

☒ Comments on Reasons For Allowance

☐ Small Entity Declaration(s)

☐ Fee Address Indication

☒ Please debit or credit **Deposit Account Number 04-1075** for any deficiency or surplus in connection with this communication. A duplicate copy of this sheet is provided for use by the Deposit Account Branch.

Respectfully submitted,

Everett G. Diederiks, Jr.
Attorney for Applicant

Registration Number: 33,323

Date: November 12, 2004



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COMMENTS ON REASONS FOR ALLOWANCE

Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Attached to the Notice of Allowability received in the above-identified U.S. patent application were comments presented by the Examiner on the Reasons For Allowance. In general, claims 1 and 102 recite a mass spectrometer and method of mass spectrometry, respectively, as stated by the Examiner. However, claims 8 and 103 are concerned with a mass spectrometer and a method of mass spectrometry wherein a mass filter comprises at least seven electrodes and transient DC voltage waveforms are progressively applied so that ions are moved toward a region of the mass filter wherein some ions having a first m/z will pass across the electrode potential whereas other ions having a second different m/z will not pass through the potential but will remain substantially radially confined within the mass filter.

Claims 16 and 104 are concerned with a mass spectrometer and method of mass spectrometry wherein the mass filter comprises a plurality of electrodes and transient DC voltage waveforms are progressively applied so that ions are moved toward a region of the mass filter wherein some ions having first and second different m/z will pass across an electrode potential whereas other ions having a third different m/z will not pass across,

and then the ions are moved toward a region of the mass filter wherein some ions having the first m/z will pass across a second electrode potential whereas other ions having the second different m/z will not pass across.

Claims 99 and 105 are concerned with a mass filter and a method of mass to charge ratio separation wherein the mass filter comprises at least seven electrodes and transient DC voltage waveforms are progressively applied to the electrodes so that at least some ions having a first m/z are separated from other ions having a second, different m/z which remain substantially radially confined within the mass filter.

Claims 100 and 106 recite a mass filter and a method of mass to charge ratio separation wherein the mass filter comprises at least seven electrodes and transient DC voltage waveforms are progressively applied to the electrodes so that ions are moved toward a region of the mass filter wherein some ions having a first m/z will pass across the electrode potential whereas other ions having a second different m/z will not pass across but will remain substantially radially confined within the mass filter.

Claims 101 and 107 recite a mass filter and method of mass to charge ratio separation wherein the mass filter comprises a plurality of electrodes and transient DC voltage waveforms are progressively applied so that ions are moved toward a region of the mass filter wherein some ions having first and second different m/z will pass across an electrode potential whereas other ions having a third different m/z will not pass across, and then the ions are moved toward a region of the mass filter wherein some ions having the first m/z will pass across a second electrode potential whereas other ions having the second different m/z will not pass across.


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Claims 108 and 117 recite a mass filter and method of mass to charge ratio separation wherein ions separate within the mass filter according to their m/z and assume different essentially static or equilibrium axial positions along the length of the mass filter, wherein the mass filter comprises a plurality of electrodes wherein, in use, an AC or RF voltage is applied to the electrodes in order to radially confine ions within the mass filter.

Claims 114 and 123 recite a mass filter and method of mass to charge separation having limitations seen to correspond to that discussed by the Examiner.

Based on the above, it is respectfully submitted that the claims have been allowed for their particular limitations as set forth above. If the Examiner should have any additional concerns regarding this matter, he is cordially invited to contact the undersigned at the number provided below to further expedite the prosecution.

Respectfully submitted,



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Date: November 12, 2004
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